



**FILE COPY**

August 15, 2005

Mr. Craig Hunt  
Water Resources Control Engineer  
State Regional Water Quality Control Board  
North Coast Region  
5550 Skyland Boulevard, Suite A  
Santa Rosa, CA 95403

Re: **Second Quarter 2005 Groundwater Monitoring Report**  
Retch Systems LLC, 100 Henry Station Road, Ukiah, California 95482  
NCRWQCB Case No. 1NMC346  
Clearwater Group Project No. AB024D

Dear Mr. Hunt,

The Clearwater Group (Clearwater), on behalf of Retch Systems LLC, is pleased to present this *Second Quarter 2005 Groundwater Monitoring Report* for work recently completed at 100 Henry Station Road, Ukiah, Mendocino County, California (Figure 1) for your review, comments and direction. The work chronicled in this report follows the recommendations set forth in Clearwater's November 19, 2002 *Site Investigation Report – Results of Well Installation and Continued Investigation*, and approved by the North Coast Regional Water Quality Control Board (NCRWQCB) in correspondence dated February 4, 2003.

#### **Site Description**

The site is located approximately 5 miles south of the City of Ukiah in a light industrial area between the Redwood Highway (State Highway 101) and tracks of the Northwestern Pacific Rail Road (Figure 1). The site is bordered by vineyards and sparse residential neighborhoods. An unnamed creek runs north to south through the site approximately 40 feet west of the former generator warehouse. There are several domestic water wells within a one mile radius of the site.



## Background

The former 10,000-gallon steel diesel fuel above ground storage tank (AST), which was set in a concrete secondary containment area, was utilized to run two large generators underlain by sumps located in a warehouse building. The sumps were constructed of concrete and were placed from 1.5 to 5 feet deep. Approximately 70 feet of underground piping connected the AST to the generators. No underground storage tanks are reported to be presently located at the facility.

During March 1998, Apex Envirotech, Inc. (Apex) of Fair Oaks, California, conducted a subsurface investigation in the vicinity of the generator warehouse to assess if groundwater conditions were impacted by past activities at the site. Results of this investigation were detailed in a report prepared by Apex, dated April 2, 1998.

During June 1998, Artesian Environmental (Artesian), now Clearwater Group (Clearwater) of Point Richmond California, drilled two Geoprobe borings (SS-4 and SS-5) to approximately 16 feet below ground surface (bgs). The borings were located along the underground fuel line between the diesel AST and the former generator building. Artesian also installed and sampled three groundwater monitoring wells (MW-1, MW-2, and MW-3) to approximately 15 feet bgs in the vicinity of the former generator building. Figure 2 shows the groundwater monitoring well locations. Results of this investigation are detailed in the *Subsurface Investigation Report* dated August 6, 1998 prepared by Artesian and submitted to the NCRWQCB and the Mendocino County Department of Environmental Health (MCDEH).

On September 13, 1999, Artesian exposed the former fuel line from the former AST secondary containment to the former generator building. The fuel line contained approximately five gallons of diesel which was pumped from the fuel line prior to removal. The fuel line was situated approximately 12 to 14 inches beneath a broken asphalt surface and set in a thin layer of trench sand mixed with gravel. In the two weeks following the removal of the fuel line, Artesian excavated contaminated soil from around the fuel line. A total of approximately 1,520 tons of soil were removed and transported off-site for disposal. In addition to the contaminated soil removed, approximately 13,500 gallons of impacted groundwater were



pumped from the excavation area. During the excavation, MW-2 was destroyed and an additional well, MW-4, was installed between the southern portion of the excavation and the stream. Results of soil remediation and well installation efforts were presented in Artesian's *Soil and Groundwater Remediation and Monitoring Well Installation Report* dated February 29, 2000.

During quarterly monitoring activities on site in January, April and December 1999, and May 2000, Artesian collected samples from the unnamed stream adjacent to the property both upstream and down stream of the excavated area. No petroleum hydrocarbons have ever been detected in the adjacent stream during sampling.

Following the installation of MW-4, Artesian performed quarterly groundwater monitoring on the site in May, August and November of 2000. During all quarterly monitoring events in 2000, total petroleum hydrocarbons as diesel (TPHd) was detected once in MW-3 at a concentration of 59 micrograms per liter ( $\mu\text{g/L}$ ), and total petroleum hydrocarbons as gasoline (TPHg) was detected once in MW-1 at 130  $\mu\text{g/L}$ , but no other contaminants of concern were detected in any of the three on-site wells (MW-1, MW-3 and MW-4). Observed groundwater flow direction in the three onsite wells changed dramatically during the three quarterly monitoring events in 2000 from westerly in May, to southerly in August and to easterly in November. Observed groundwater flow direction prior to the destruction of MW-2 was south-southwesterly toward the unnamed creek, as would be expected.

In an August 22, 2001 letter, the NCRWQCB requested that Retech submit a workplan and conduct additional site investigation to assess the possible presence of free product within the overexcavated area where the original fuel line leak occurred by replacing MW-2 with a new well.

In November 2001, Clearwater Group was retained by Retech Systems LLC to complete the additional Site Investigation of the property to comply with NCRWQCB's requests, in their August 22, 2001 letter. In accordance with Clearwater Group's *Workplan*, dated November 13, 2001, Clearwater has completed the following:

- One 4-inch diameter groundwater monitoring well, MW-5, was installed on October 17, 2002 within the excavation near the former location of MW-2 to determine the possible presence of free petroleum product within the overexcavated area.



- Two 2-inch diameter groundwater monitoring wells, MW-6 and MW-7 were also installed on October 17, 2002 upgradient from the former excavation to more accurately determine groundwater flow direction across the excavation. Table 1 summarizes the well construction data.
- Groundwater monitoring and reporting first and second quarter 2003.
- In accordance with Clearwater's *Groundwater Sampling Protocols* (Appendix A), water samples from all the six project wells were collected on July 22, 2003 and analyzed for TPH diesel by 8015B with silica gel cleanup, TPH gasoline by 8260B, benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by 8260B. One sample from MW-1 that tested positive for diesel was run for Semi-volatile organic compounds (SVOC)) by EPA Method 8270.

### **Groundwater and Surface Water Monitoring Field Activities**

Clearwater conducted groundwater and surface water monitoring and sampling field activities on May 25, 2005. All work was performed in accordance with Clearwater's Field Protocols (Attachment A). The wells were checked for the presence of SPH. An electronic water level indicator was used to gauge depth to water accurate to within  $\pm 0.01$  feet. The stream was sampled prior to the monitoring wells being gauged. The wells were purged of groundwater until sampling parameters (e.g. temperature, pH and conductivity) stabilized, which occurred by approximately three wet casing volumes. Groundwater monitoring and well purging information was recorded on the Well Gauging/Purging Calculations and Purge Data sheets (Attachment B). To prevent cross-contamination, purging devices were decontaminated between wells in an Alconox® wash followed by double rinsing in clean tap water. Following the recovery of water levels to at least 80% of their static levels, Clearwater collected groundwater and surface water samples from the monitoring wells using new disposable polyethylene bailers. Samples were labeled, documented on a chain-of-custody form, and placed on ice in a cooler for transport to the project laboratory. Purge water and rinseate transported in the van and drummed at yard pending disposal.

The samples were analyzed for; TPHd by EPA Method 8015 modified with silica gel cleanup, TPHg by EPA Method 8260B, BTEX and MTBE by EPA Method 8260B at Kiff Analytical LLC, Davis, California, a California Department of Health Services certified laboratory. Additional



water samples were collected from monitoring wells MW-1 and MW-3 for possible analysis of SVOCs by EPA Method 8270 at Calscience Environmental Laboratories, Inc., Garden Grove, California. The analysis was scheduled to be performed on the water sample containing the highest concentration of TPHd.

### **Groundwater Monitoring Results**

On May 25, 2005 the depth of water ranged from 3.15 (MW-5) to 4.15 feet bgs (MW-3) creating a gradient of 0.014 feet/foot in a south west direction (Figure 3). The depth to water measurement recorded for MW-5 was not used in the contouring of the groundwater gradient due to its installation in backfill. There was no observable floating product in any of the monitoring wells. The laboratory reported that all of the samples submitted did not contain concentrations of the target analytes above the standard laboratory reporting limit of 50 µg/L for TPHd and TPHg or 0.50 µg/L for BTEX and MTBE (Table 2). For a complete summary of the analytical results see Kiff Analytical Report No. 44009 included as Attachment C.

### **Conclusions and Recommendations**

Groundwater direction and gradient are consistent with previous observations made during the same period of the hydrologic cycle. The concentration of TPHd reported in the samples submitted during the last groundwater monitoring event (May 2004) appears to have been anomalous. Clearwater recommends that the groundwater monitoring program be discontinued for the project site while a No Further Action Request Report (NFAR) is prepared.

#### **Attachments:**

- Figure 1: Site Location Map
- Figure 2: Site Plan
- Figure 3: Groundwater Elevation Contour Map, May 25, 2005
- Figure 4: Dissolved Phase Hydrocarbon Distribution, May 25, 2005
- Table 1: Well Construction Data
- Table 2: Groundwater Elevations and Water Sample Analytical Results
- Attachment A: Clearwater Groundwater Sampling Protocols
- Attachment B: Clearwater Sampling and Field Notes
- Attachment C: Kiff Analytical Report No. 44009



## Certification

This report was prepared under the supervision of a Professional Geologist in the state of California. All statements, conclusions and recommendations are based solely upon published results from previous consultants, field observations by Clearwater and laboratory analysis performed by a California State-certified laboratory related to the work performed by Clearwater.

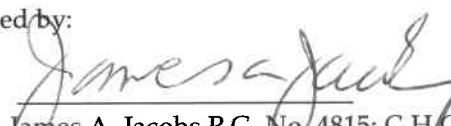
Information and interpretation presented herein are for the sole use of the client and regulating agency. The information and interpretation contained in this document should not be relied upon by a third party.

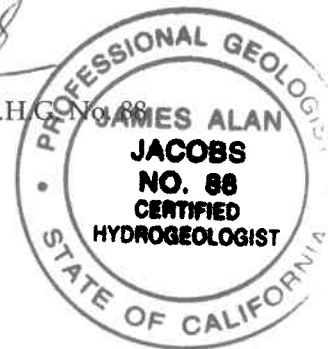
The service performed by Clearwater Group has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

Prepared by:

  
Jessica Chiaro  
Project Manager

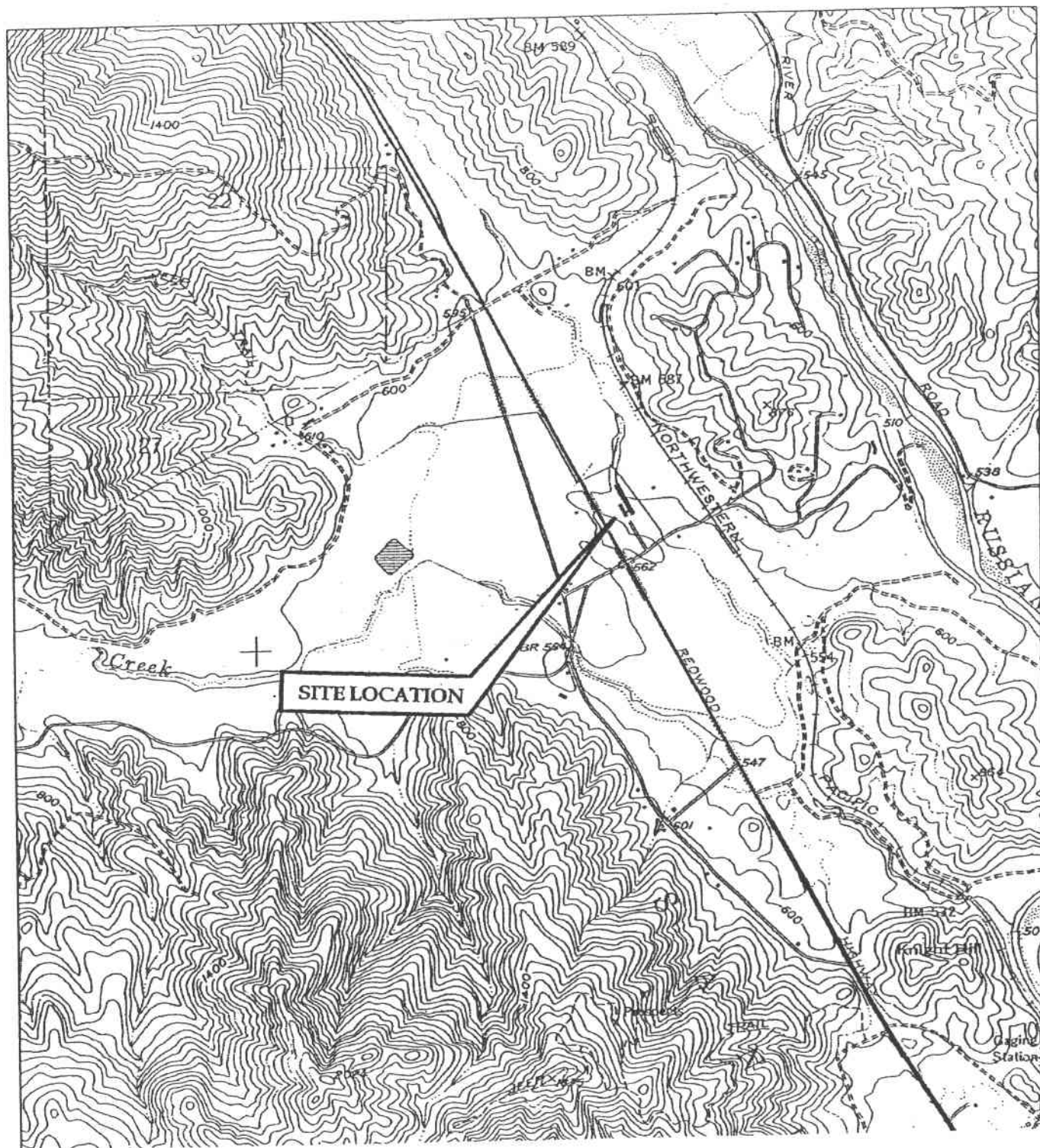
Reviewed by:

  
James A. Jacobs P.G. No. 4815; C.H.G. No. 88  
Chief Hydrogeologist

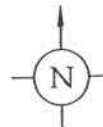


Cc: Mr. Robin Lampson, Retech Systems LLC, 100 Henry Station Road, Ukiah, CA 95482  
Mr. Pete Lowman, Mendocino County Health Department, 501 Low Gap Road, Room 1326,  
Ukiah, CA 95482

## FIGURES



NOT TO SCALE



**SITE LOCATION MAP**  
 Retech Services, Inc.  
 100 Henery Station Road  
 Ukiah, California

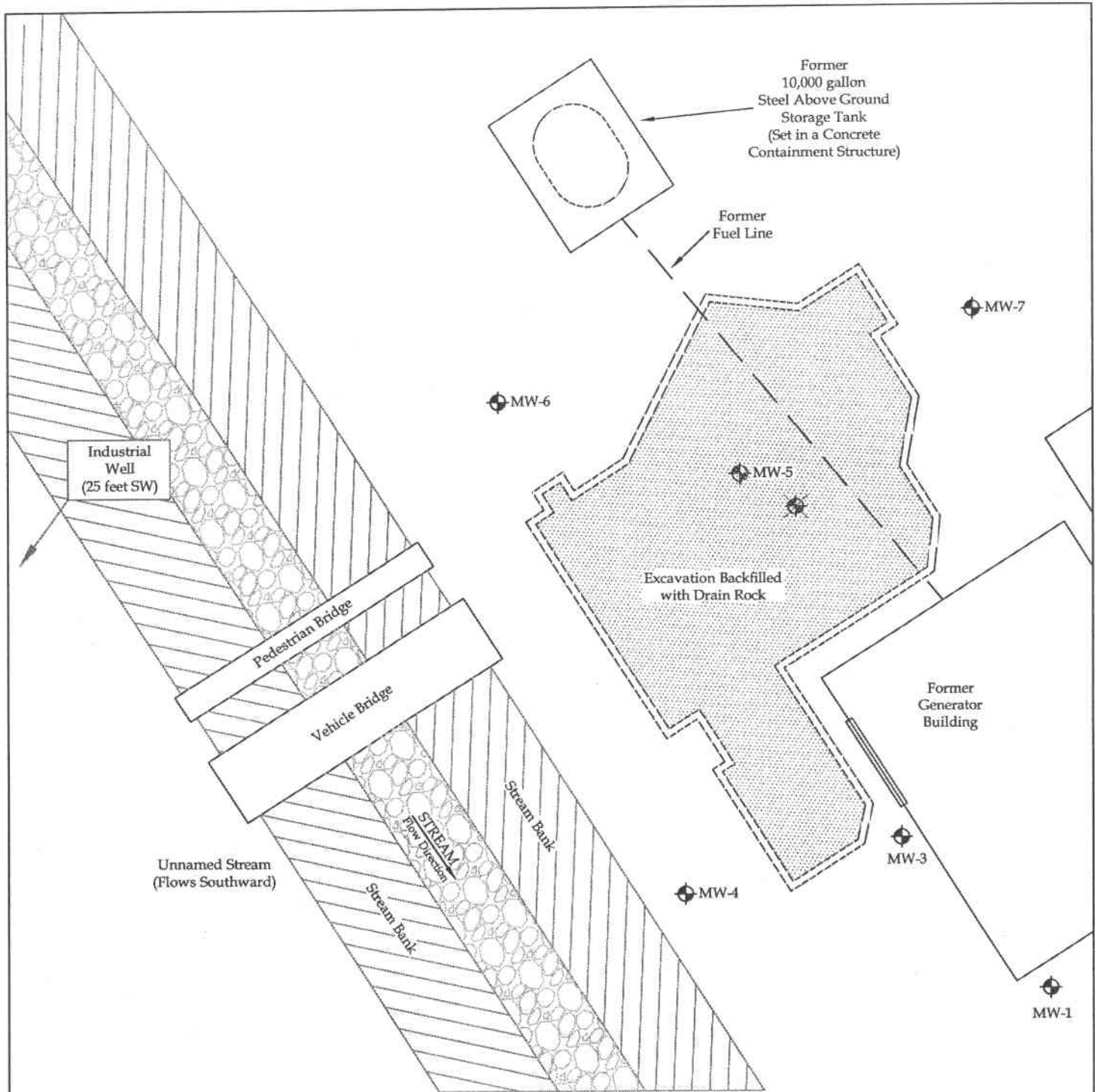
**CLEARWATER GROUP**

Project No.  
**AB024**

Figure Date  
**11/01**

Figure  
**1**





### LEGEND

- MW-1 GROUNDWATER MONITORING WELL LOCATION
- MW-2 DESTROYED/FORMER GROUNDWATER MONITORING WELL LOCATION

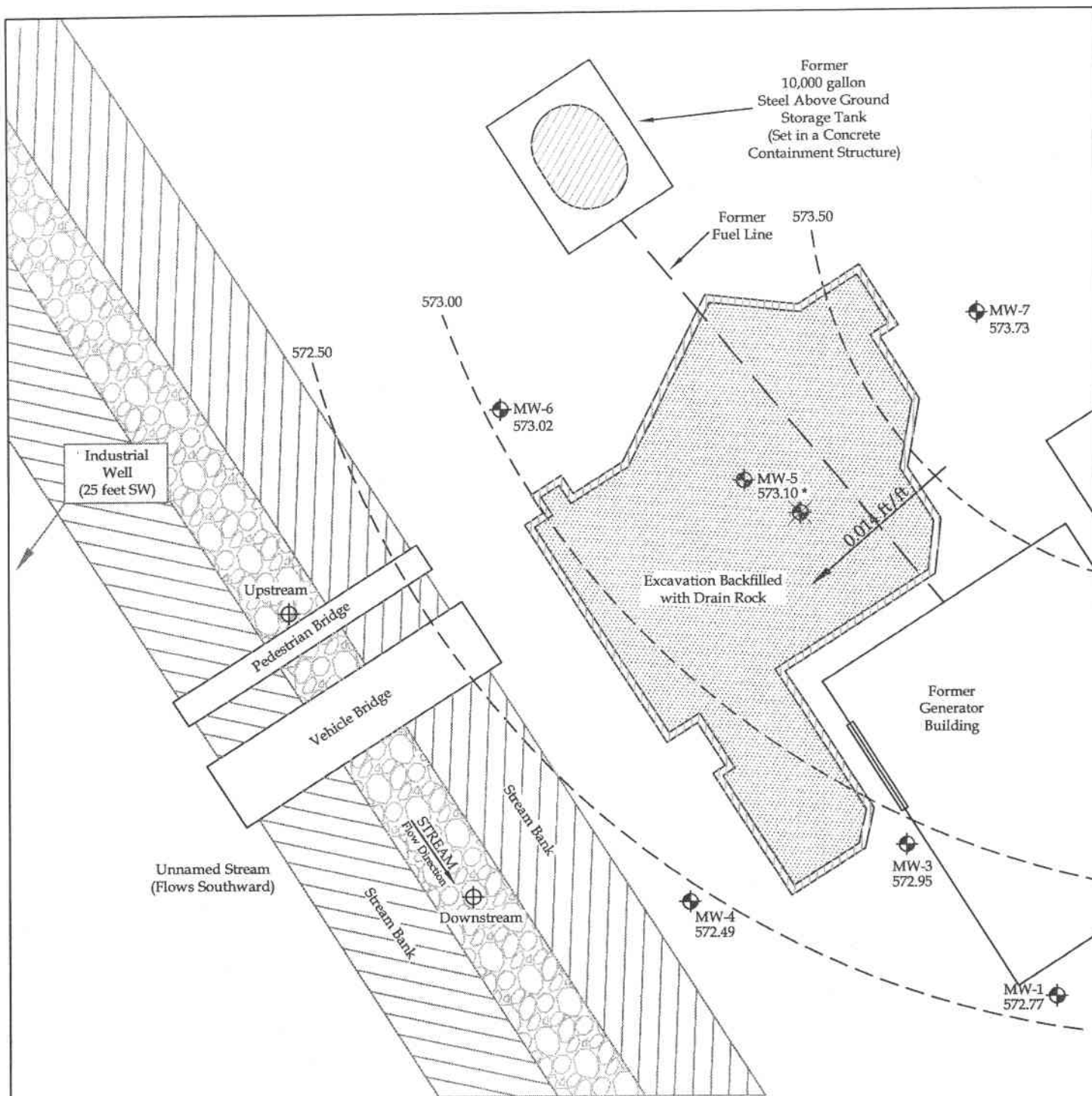
**SITE PLAN**  
 Retech Services, Inc.  
 100 Henry Station Road  
 Ukiah, California

### CLEARWATER GROUP

Project No.  
**AB024C**

Figure Date  
**08/05**

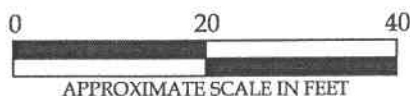
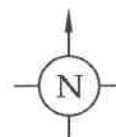
Figure  
**2**



### LEGEND

- MW-1 GROUNDWATER MONITORING WELL LOCATION
- MW-2 DESTROYED/FORMER GROUNDWATER MONITORING WELL LOCATION
- UPSTREAM
- STREAM WATER SAMPLE LOCATIONS

- 573.00 GROUNDWATER ELEVATION CONTOUR (HEIGHT IN FEET ABOVE MSL)
- 573.00 GROUNDWATER ELEVATION
- 575.35 \* ANOMALOUS DATA NOT USED IN CONTOUR WELL INSTALLED IN BACKFILL



### GROUNDWATER ELEVATIONS

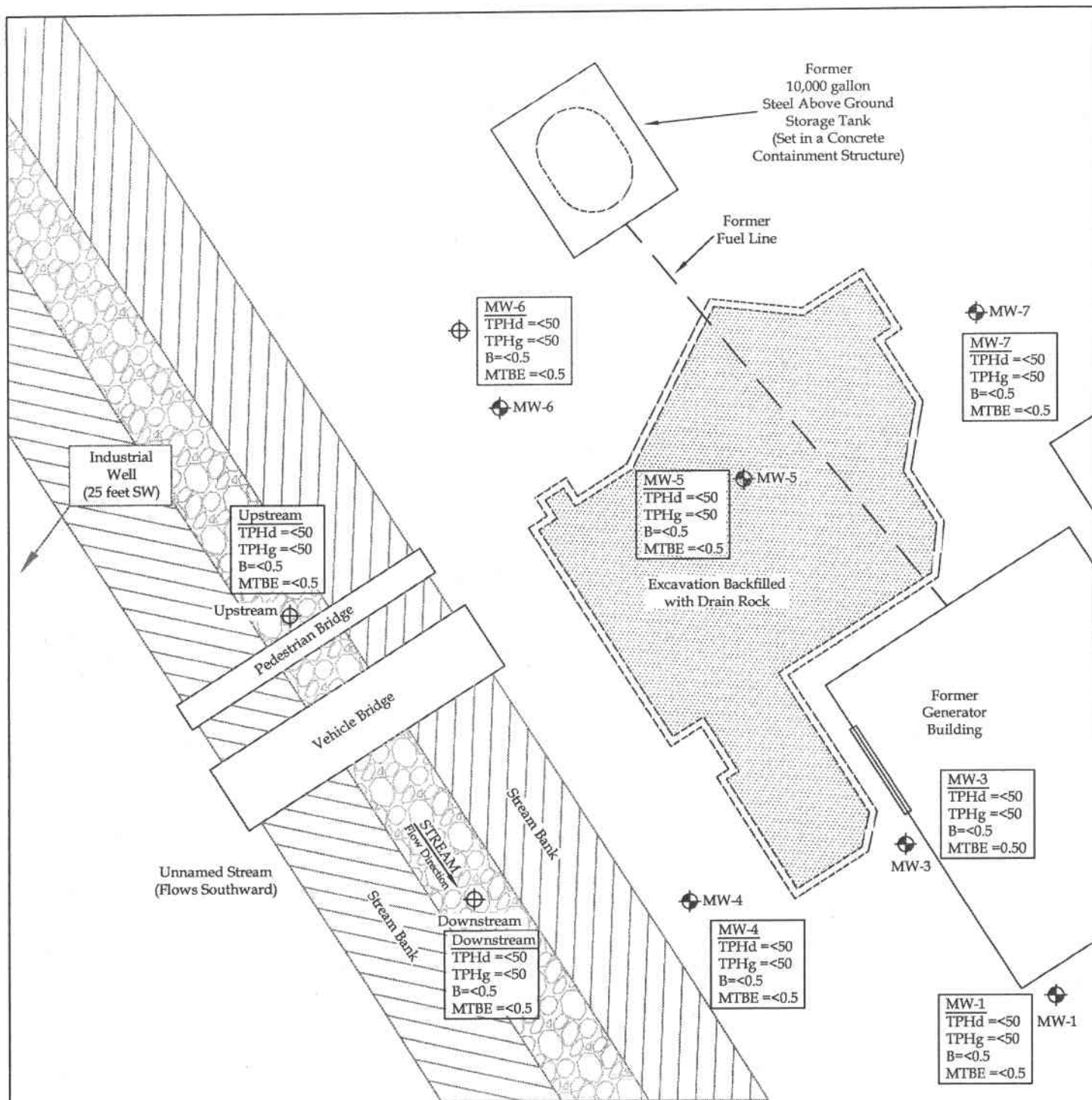
May 25, 2005  
 Retech Services, Inc.  
 100 Henry Station Road  
 Ukiah, California




### CLEARWATER GROUP

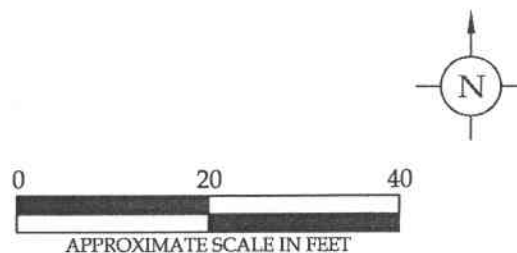
Project No.  
 AB024D

Figure Date  
 6/05

Figure  
 3



LEGEND		CONCENTRATIONS OF: TOTAL PARTS HYDROCARBONS AS DIESEL (TPHd) AS GASOLINE (TPHg), BENZENE (B), AND METHYL TERT-BUTYL ETHER (MTBE). ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L)
 MW-1	GROUNDWATER MONITORING WELL LOCATION	
	UPSTREAM	
	STREAM WATER SAMPLE LOCATIONS	
		MW-1 TPHd = 110 TPHg = 51 B = <0.5 MTBE = <0.5



## DISSOLVED PHASE HYDROCARBON CONCENTRATIONS

May 25, 2005  
Retech Services, Inc.  
100 Henry Station Road  
Ukiah, California

## CLEARWATER GROUP

Project No.  
AB024D

Figure Date  
6/05

Figure  
4

## TABLES

**Table 1**  
**WELL CONSTRUCTION DATA**  
**Retech Systems LLC**  
100 Henry Station Road  
Ukiah, CA  
Clearwater Group Project No. AB024C

Well I.D.	Date Intstalled	Borehole Diameter (inches)	Depth of Borehole (feet)	Casing Diameter (inches)	Screened Interval (feet)	Filter Pack (feet)	Bentonite Seal (feet)	Cement (feet)
MW-1	6/15/1998	6.0	16.0	2.0	2.5-15.0	2.0-15.0	1.5-2.0	0.75-1.5
MW-2*	6/15/1998	6.0	16.0	2.0	2.5-15.0	2.0-15.0	1.5-2.0	0.75-1.5
MW-3	6/15/1998	6.0	16.0	2.0	2.5-15.0	2.0-15.0	1.5-2.0	0.75-1.5
MW-4	12/10/1999	6.0	16.0	2.0	2.5-15.0	2.0-15.0	1.5-2.0	0.75-1.5
MW-5	10/17/2002	10.0	15.0	4.0	4.5-15.0	4.0-15.0	2.0-4.0	0.5-2.0
MW-6	10/17/2002	8.0	15.0	2.0	4.5-15.0	4.0-15.0	2.0-4.0	0.5-2.0
MW-7	10/17/2002	8.0	15.0	2.0	4.5-15.0	4.0-15.0	2.0-4.0	0.5-2.0

Note:  
MW-2\*      Destroyed

**Table 2**  
**GROUNDWATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS**  
**Retech Services, Inc.**  
**100 Henry Station Road**  
**Ukiah, California**  
**Clearwater Group Project No. AB024D**

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	SPH (feet)	TPHg (µg/L)	TPHd (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	SVOCs (µg/L)	AN (µg/L)	2MN (µg/L)	NAP (µg/L)
MW-1	06/23/98	576.73	5.08	571.65	0	75	180	<0.5	<0.5	<0.5	<0.5	8.5	All ND	---	---	---
	01/11/99	576.73	5.34	571.39	0	62	135	<0.3	<0.3	<0.5	<0.5	11	All ND	---	---	---
	02/22/99	576.73	3.27	573.46	---	---	---	---	---	---	---	---	---	---	---	---
	03/11/99	576.73	3.52	573.21	---	---	---	---	---	---	---	---	---	---	---	---
	04/23/99	576.73	4.41	572.32	0	72	90	<0.3	<0.3	<0.5	<0.5	1.7	All ND	---	---	---
	05/27/99	576.73	5.38	571.35	---	---	---	---	---	---	---	---	---	---	---	---
	06/25/99	576.73	6.02	570.71	---	---	---	---	---	---	---	---	---	---	---	---
	07/21/99	576.73	7.26	569.47	---	---	---	---	---	---	---	---	---	---	---	---
	08/27/99	576.73	8.91	567.82	---	---	---	---	---	---	---	---	---	---	---	---
	10/04/99	576.73	9.60	567.13	---	---	---	---	---	---	---	---	---	---	---	---
	11/06/99	576.73	8.61	568.12	---	---	---	---	---	---	---	---	---	---	---	---
	12/17/99	576.73	5.93	570.80	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	01/27/00	576.73	3.88	572.85	---	---	---	---	---	---	---	---	---	---	---	---
	05/11/00	576.73	4.71	572.02	0	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	08/10/00	576.73	8.14	568.59	0	130	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	11/02/00	576.73	7.01	569.72	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	10/28/02	576.73	10.55	566.18	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	01/21/03	576.73	3.85	572.88	0	130	220	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	04/23/03	576.73	3.86	572.87	0	774	130	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	07/22/03	576.73	6.79	569.94	0	<50	87	<0.5	<0.5	<0.5	<0.5	0.62	All ND	---	---	---
	10/29/03	576.73	10.60	566.13	0	<50	200	<0.5	<0.5	<0.5	<0.5	<0.5	All ND	---	---	---
	02/02/04	576.73	2.75	573.98	0	51	110	<0.5	<0.5	<0.5	<0.5	<0.5	All ND	---	---	---
	05/10/04	576.73	5.33	571.40	0	58	650	<0.5	<0.5	<0.5	<0.5	<0.5	All ND	---	---	---
	05/25/05	576.73	3.96	572.77	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
MW-2*	06/23/98	577.18	4.98	572.20	0	36,000	110,000	<0.5	51	150	150	<100	---	50	120	80
	01/11/99	577.18	5.29	571.89	0	5,500	49,000	4	<2.4	55	22	140	---	<13	310	130
	02/22/99	577.18	2.81	574.37	---	---	---	---	---	---	---	---	---	---	---	---
	03/11/99	577.18	3.10	574.08	---	---	---	---	---	---	---	---	---	---	---	---
	04/23/99	577.18	4.14	573.04	0	4,100	59,000	<1.2	<1.2	46	9.6	120	---	<10	52	48
	05/27/99	577.18	5.25	571.93	---	---	---	---	---	---	---	---	---	---	---	---
	06/25/99	577.18	5.97	571.21	---	---	---	---	---	---	---	---	---	---	---	---
	07/21/99	577.18	7.19	569.99	---	---	---	---	---	---	---	---	---	---	---	---
	08/27/99	577.18	9.00	568.18	---	---	---	---	---	---	---	---	---	---	---	---
	09/08/99	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

WELL DESTROYED DURING EXCAVATION ACTIVITIES

Table 2  
GROUNDWATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS  
Retch Services, Inc.  
100 Henry Station Road  
Ukiah, California  
Clearwater Group Project No. AB024D

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	SPH (feet)	TPHg (µg/L)	TPHd (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	SVOCs (µg/L)	AN (µg/L)	2MN (µg/L)	NAP (µg/L)
MW-3	06/23/98	577.10	5.46	571.64	0	380	200	<0.5	<0.5	<0.5	1.7	17**	All ND	---	---	---
	01/11/99	577.10	5.68	571.42	0	<50	<50	<0.3	<0.3	<0.5	<0.5	19	All ND	---	---	---
	02/22/99	577.10	3.83	573.27	---	---	---	---	---	---	---	---	---	---	---	---
	03/11/99	577.10	4.10	573.00	---	---	---	---	---	---	---	---	---	---	---	---
	04/23/99	577.10	4.91	572.19	0	<50	<50	<0.3	<0.3	<0.5	<0.5	5	All ND	---	---	---
	05/27/99	577.10	5.73	571.37	---	---	---	---	---	---	---	---	---	---	---	---
	06/25/99	577.10	6.28	570.82	---	---	---	---	---	---	---	---	---	---	---	---
	07/21/99	577.10	7.54	569.56	---	---	---	---	---	---	---	---	---	---	---	---
	08/27/99	577.10	9.19	567.91	---	---	---	---	---	---	---	---	---	---	---	---
	10/04/99	577.10	9.80	567.30	---	---	---	---	---	---	---	---	---	---	---	---
	11/06/99	577.10	8.69	568.41	---	---	---	---	---	---	---	---	---	---	---	---
	12/17/99	577.10	6.05	571.05	0	<50	78	<0.5	<0.5	<0.5	<0.5	13	All ND	---	---	---
	01/27/00	577.10	4.10	573.00	---	---	---	---	---	---	---	---	---	---	---	---
	05/11/00	577.10	5.23	571.87	0	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	08/10/00	577.10	8.26	568.84	0	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	11/02/00	577.10	7.25	569.85	0	<50	59	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	10/28/02	577.10	10.74	566.36	0	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
MW-4	01/21/03	577.10	4.21	572.89	0	<50	110	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	04/23/03	577.10	4.12	572.98	0	<50	58	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	07/22/03	577.10	6.89	570.21	0	<50	78	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	10/29/03	577.10	10.75	566.35	0	<50	120	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	02/02/04	577.10	3.00	574.10	0	<50	86	<0.5	<0.5	<0.5	<0.5	0.58	---	---	---	---
	05/10/04	577.10	4.49	572.61	0	<50	120	<0.5	<0.5	<0.5	<0.5	<0.5	All ND	---	---	---
	05/25/05	577.10	4.15	572.95	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	12/17/99	576.25	5.51	570.74	0	<50	<50	<0.5	<0.5	<0.5	<0.5	11	All ND	---	---	---
	1/27/00	576.25	3.73	572.52	---	---	---	---	---	---	---	---	---	---	---	---
	05/11/00	576.25	4.59	571.66	0	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	08/10/00	576.25	7.39	568.86	0	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	11/02/00	576.25	6.25	570.00	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	10/28/02	576.25	9.79	566.46	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	01/21/03	576.25	3.95	572.30	0	<50	64	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	04/23/03	576.25	3.77	572.48	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	07/22/03	576.25	6.12	570.13	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	10/29/03	576.25	9.75	566.50	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	02/02/04	576.25	2.55	573.70	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	05/10/04	576.25	4.82	571.43	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	05/25/05	576.25	3.76	572.49	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---

**Table 2**  
**GROUNDWATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS**  
**Retech Services, Inc.**  
**100 Henry Station Road**  
**Udiah, California**  
**Clearwater Group Project No. AB024D**

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	SPH (feet)	TPHg (µg/L)	TPHd (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	SVOCs (µg/L)	AN (µg/L)	2MN (µg/L)	NAP (µg/L)
MW-5	10/28/02	576.20	9.87	566.33	0	<50	100	<0.5	<0.5	<0.5	<1.0	<1.0	All ND	<5.0	<5.0	<5.0
	01/21/03	576.20	3.41	572.79	0	<50	76	<0.5	<0.5	<0.5	<1.0	<1.0	All ND	---	---	---
	04/23/03	576.20	3.16	573.04	0	58.4	<50	<0.5	<0.5	<0.5	<1.0	<1.0	All ND	---	---	---
	07/22/03	576.20	5.90	570.30	0	<50	<50	<0.5	<0.5	<0.5	<50	<0.50	All ND	---	---	---
	10/29/03	576.20	9.82	566.38	0	<50	<50	<0.5	<0.5	<0.5	<50	<0.50	---	---	---	---
	02/02/04	576.20	1.85	574.35	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	05/10/04	576.25	4.42	571.83	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
MW-6	05/25/05	576.25	3.15	573.10		<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	10/28/02	576.70	10.00	566.70	0	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	01/21/03	576.70	3.77	572.93	0	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	04/23/03	576.70	3.70	573.00	0	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	07/22/03	576.70	6.20	570.50	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.50	---	---	---	---
	10/29/03	576.70	9.97	566.73	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.50	---	---	---	---
	02/02/04	576.70	3.15	573.55	0	<50	150.4	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
MW-7	05/10/04	576.70	4.95	571.75	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.50	---	---	---	---
	05/25/05	576.70	3.68	573.02	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	10/28/02	577.14	10.49	566.65	0	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	01/21/03	577.14	3.20	573.94	0	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	04/23/03	577.14	3.47	573.67	0	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	07/22/03	577.14	6.58	570.56	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.50	---	---	---	---
	10/29/03	577.14	10.51	566.63	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.50	---	---	---	---
UP Stream	02/02/04	577.14	2.10	575.04	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	05/10/04	577.14	5.13	572.01	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	05/25/05	577.14	3.41	573.73	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	01/11/99	---	---	---	0	<50	<50	<0.3	<0.3	<0.5	<0.5	<1	All ND	---	---	---
	04/23/99	---	---	---	0	<50	<50	<0.3	<0.3	<0.5	<0.5	<1	All ND	---	---	---
	12/17/99	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	05/11/00	---	---	---	0	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
AB024D	08/10/00	---	---	---	0	---	---	---	---	---	---	---	---	---	---	---
	11/02/00	---	---	---	0	---	---	---	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	04/23/03	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	07/22/03	---	---	---	0	---	---	---	---	---	---	---	---	---	---	---
	10/29/03	---	---	---	0	---	---	---	<0.5	<0.5	<0.5	<5.0	---	---	---	---
	02/02/04	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	05/10/04	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---



**Table 2**  
**GROUNDWATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS**  
**Retech Services, Inc.**  
**100 Henry Station Road**  
**Ukiah, California**  
**Clearwater Group Project No. AB024D**

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	SPH (feet)	TPHg (µg/L)	TPHd (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	SVOCs (µg/L)	AN (µg/L)	2MN (µg/L)	NAP (µg/L)
Down Stream	01/11/99	---	---	---	0	<50	<50	<0.3	<0.3	<0.5	<0.5	<1	All ND	---	---	---
	04/23/99	---	---	---	0	<50	<50	<0.3	<0.3	<0.5	<0.5	<1	All ND	---	---	---
	12/17/99	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	05/11/00	---	---	---	0	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	08/10/00	---	---	---	0	---	---	---	---	---	---	---	---	---	---	---
	11/02/00	---	---	---	0	---	---	---	---	---	---	---	---	---	---	---
	04/23/03	---	---	---	0	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	07/22/03	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	All ND	---	---	---
	10/29/03	---	---	---	0	---	---	---	---	---	---	---	---	---	---	---
	02/02/04	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	05/10/04	---	---	---	0	<50	180	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	05/25/05	---	---	---	0	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---

**NOTES:**

TOC Top of well casing referenced to mean sea level  
DTW Depth to water  
GWE Groundwater elevation  
SPH Separate phase hydrocarbons (floating product); no samples taken  
BTEx Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8020 (modified)  
TPHg Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified)  
TPHd Total petroleum hydrocarbons as diesel by EPA method 8015 (modified)  
MTBE (8260) Methyl tertiary butyl ether by EPA Method 8260B  
SVOCs (8270) Semi-volatile organic compounds by EPA Method 8270  
A Anthracene by EPA Method 8270  
2MN 2-Methyl-naphthalene by EPA Method 8270  
N Naphthalene by EPA Method 8270  
(µg/L) Micrograms per liter  
ND Not detected; method detection limit not reported  
<# Not detected > indicated method detection limit  
--- Not available, gauged, or sampled  
\* MW-2 Destroyed 9/8/99  
\*\* MTBE Confirmation by EPA Method 8260  
▲ Results within quantitation range; chromatographic pattern not typical of fuel

## ATTACHMENT A

## CLEARWATER GROUP

### Groundwater Monitoring and Sampling Field Procedures

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#### Groundwater Monitoring

Prior to beginning, a decontamination area is established. Decontamination procedures consist of scrubbing downhole equipment in an Alconox® solution wash (wash solution is pumped through any purging pumps used), and rinsing in a first rinse of potable water and a second rinse of potable water or deionized water if the latter is required. Any non-dedicated downhole equipment is decontaminated prior to use.

Prior to gauging, purging, and sampling a well, caps for all on-site wells should be opened to allow atmospheric pressure to equalize if local groundwater is under confined or semi-confined condition. The static water level is measured to the nearest 0.01 feet with electronic water sounder. Depth to bottom is typically measured once per year, at the request of the project manager, and during Clearwater's first visit to a site. If historical analytical data are not available, with which to establish a reliable order of increasing well contamination, the water sounder and tape will be decontaminated between each well. If floating separate-phase hydrocarbons (SPH) are suspected or observed, SPH is collected using a clear, open-ended product bailer, and the thickness is measured to the nearest 0.01 feet in the bailer. SPH may alternatively be measured with an electronic interface probe. Any monitoring well containing a measurable thickness of SPH before or during purging is not additionally purged and no sample is collected from that well. Wells containing hydrocarbon sheen are sampled unless otherwise specified by the project manager. Field observations such as well integrity as well as water level measurements and floating product thicknesses are noted on the Gauging Data/Purge Calculations form.

#### Well Purging

Each monitoring well to be sampled is purged using either a PVC bailer or a submersible pump. Physical parameters (pH, temperature and conductivity) of the purge water are monitored during purging activities to assess if the water sample collected is representative of the aquifer. If required, parameters such as dissolved oxygen, turbidity, salinity etc. are also measured. Samples are considered representative if parameter stability is achieved. Stability is defined as a change of less than 0.25 pH units, less than 10% change in conductivity in micro mhos, and less than 1.0 degree centigrade (1.8 degrees Fahrenheit) change in temperature. Parameters are measured in a discreet sample decanted from the bailer separately from the rest of the purge water. Parameters are measured at least four times during purging; initially, and at volume intervals of one well volume. Purging continues until three well casing volumes have been removed or until the well completely dewater. Wells which dewater or demonstrate a slow recharge may be sampled after fewer than three well volumes have been removed. Well purging information is recorded on the Purge Data sheet. All meters used to measure parameters are calibrated daily. Purge water is sealed, labeled, and stored on site in D.O.T.-approved 55-gallon drums. After being chemically profiled, the water is removed to an appropriate disposal facility by a licensed waste hauler.

#### Groundwater Sample Collection

Groundwater samples are collected immediately after purging or, if purging rate exceeds well recharge rate, when the well has recharged to at least 80% of its static water level. If recharge is extremely slow, the well is allowed to recharge for at least two hours, if practicable, or until sufficient volume has accumulated for sampling. The well is sampled within 24 hours of purging or repurged. Samples are collected using polyethylene bailers, either disposable or dedicated to the well. Samples being analyzed for compounds most sensitive to volatilization are collected first. Water samples are placed in appropriate laboratory-supplied containers, labeled, documented on a chain of custody form and placed on ice in a chilled cooler for transport to a state-certified analytical laboratory. Analytical detection limits match or surpass standards required by relevant local or regional guidelines.

#### Quality Assurance Procedures

To prevent contamination of the samples, Clearwater personnel adhere to the following procedures in the field:

- A new, clean pair of latex gloves is put on prior to sampling each well.
- Wells are gauged, purged and groundwater samples are collected in the expected order of increasing degree of contamination based on historical analytical results.

- All purging equipment will be thoroughly decontaminated between each well, using the procedures previously described at the beginning of this section.
- During sample collection for volatile organic analysis, the amount of air passing through the sample is minimized. This helps prevent the air from stripping the volatiles from the water. Sample bottles are filled by slowly running the sample down the side of the bottle until there is a convex meniscus over the mouth of the bottle. The lid is carefully screwed onto the bottle such that no air bubbles are present within the bottle. If a bubble is present, the cap is removed and additional water is added to the sample container. After resealing the sample container, if bubbles still are present inside, the sample container is discarded and the procedure is repeated with a new container.

Laboratory and field handling procedures may be monitored, if required by the client or regulators, by including quality control (QC) samples for analysis with the groundwater samples. Examples of different types of QC samples are as follows:

- Trip blanks are prepared at the analytical laboratory by laboratory personnel to check field handling procedures. Trip blanks are transported to the project site in the same manner as the laboratory-supplied sample containers to be filled. They are not opened, and are returned to the laboratory with the samples collected. Trip blanks are analyzed for purgeable organic compounds.
- Equipment blanks are prepared in the field to determine if decontamination of field sampling equipment has been effective. The sampling equipment used to collect the groundwater samples is rinsed with distilled water which is then decanted into laboratory-supplied containers. The equipment blanks are transported to the laboratory, and are analyzed for the same chemical constituents as the samples collected at the site.
- Duplicates are collected at the same time that the standard groundwater samples are being collected and are analyzed for the same compounds in order to check the reproducibility of laboratory data. They are typically only collected from one well per sampling event. The duplicate is assigned an identification number that will not associate it with the source well.

Generally, trip blanks and field blanks check field handling and transportation procedures. Duplicates check laboratory procedures. The configuration of QC samples is determined by Clearwater depending on site conditions and regulatory requirements.

## ATTACHMENT B

DAILY FIELD REPORT

Page: 1 of 1

Date: 5/25/05  
Field Engineer/Technician: RODNEY BERRY  
Project Name: RETECH  
Project Number: A13024D

Company/ Firm: TAD Inc. dba Clearwater Group  
Project Manager: JESSICA CHIARO  
Site Contact:

EVENTS/COMMENTS/REMARKS

TIME

8:40 ARRIVED AT WORK  
8:45 WENT TO GET GAS  
9:00 LEFT GAS STATION FOR SITE  
10:15 STOPPED TO GET SOMETHING TO DRINK AND ICE  
11:00 ARRIVED AT SITE STARTED OPENING THE  
WELLS. COULD NOT FIND ONE IN BETWEEN  
DOING OTHER THINGS ~~OR~~ SEARCHED MAYBE  
1 1/2 HOURS. ROBIN CAME ALONG AND HIM HAVING  
A BETTER IDEA WHERE IT WAS AT EVENTUALLY  
FOUND IT.  
3:15 LEFT FOR OFFICE  
5:30 ARRIVED AT OFFICE DID SOME PAPERWORK  
AND CALLED KIFF  
6:00 LEFT FOR HOME

TEMP. SEEMED TO BE IN  
THE HIGH 80'S (HOT)

Signature: \_\_\_\_\_

Page: \_\_\_\_ of \_\_\_\_

Date: \_\_\_\_\_

Attachments: \_\_\_\_\_

Figures Included: \_\_\_\_\_



# PURGE DATA SHEET

100 HENRY STATION Rd.

Sheet 2 of 2  
Tech: Rodney Berry

Job No.: ABO240 Location: Ukiah, CA

Date: 5/25/05

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
1238	2.00	NA	531	23.8	NA	6.93	NA	NA	NA	TPHg TPHd 8260
Calc. purge	1242	4.00	✓	530	23.8	✓	6.93	✓	✓	BTEX MTBE Metals
volume	1246	5.50	✓	530	23.8	✓	6.93	✓	✓	Purging Method:
5.30										PVC Bailer/Pump/Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor

CLEAR, low, good, NO SHEEN, NO ODOR

POST DEPTH TO WATER: 3.61 SAMPLE TIME: 1400

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
1253	2.00	NA	424	22.0	NA	6.68	NA	NA	NA	TPHg TPHd 8260
Calc. purge	1256	4.00	✓	424	22.0	✓	6.68	✓	✓	BTEX MTBE Metals
volume	1258	5.50	✓	424	22.0	✓	6.67	✓	✓	Purging Method:
5.16										PVC Bailer/Pump/Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor

CLEAR, low, good, NO SHEEN, NO ODOR

POST DEPTH TO WATER: 3.98 SAMPLE TIME: 1415

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
1304	2.00	NA	400	21.6	NA	6.73	NA	NA	NA	TPHg TPHd 8260
Calc. purge	1308	4.00	✓	400	21.6	✓	6.73	✓	✓	BTEX MTBE Metals
volume	1311	5.50	✓	401	21.6	✓	6.73	✓	✓	Purging Method:
5.07										PVC Bailer/Pump/Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor

CLEAR, low, good, NO SHEEN, NO ODOR

POST DEPTH TO WATER: 3.65 SAMPLE TIME: 1430

Clearwater Group Inc. - 229 Tewksbury Avenue, Point Richmond, California 94801

Phone : (510) 307-9943 Fax : (510) 232-2823

updated 3/15/05

# PURGE DATA SHEET

Job No. AB024D Location: 100 Hanky Station Rd. Ukiah, CA

Date: 5/25/05

Sheet 1 of 2  
Tech Rodney Berry

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
<u>10W-7</u>	<u>1213</u>	<u>2.00</u>	<u>NA</u>	<u>414</u>	<u>26.8</u>	<u>NA</u>	<u>7.50</u>	<u>NA</u>	<u>NA</u>	TPHg TPHd 8260
Calc. purge	<u>1218</u>	<u>4.00</u>	<u>1</u>	<u>413</u>	<u>26.8</u>	<u>1</u>	<u>7.31</u>	<u>1</u>	<u>1</u>	BTEX MTBE Metals
volume	<u>1238</u>	<u>5.50</u>	<u>1</u>	<u>413</u>	<u>26.7</u>	<u>1</u>	<u>7.30</u>	<u>1</u>	<u>1</u>	Purging Method:
<u>5.38</u>										PVC Bailer/Pump/Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor

light brown, low, good, no sheen, no odor

POST DEPTH TO WATER: 3.37

SAMPLE TIME: 1315

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
<u>10W-5</u>	<u>1205</u>	<u>8.00</u>	<u>NA</u>	<u>445</u>	<u>29.0</u>	<u>NA</u>	<u>7.09</u>	<u>NA</u>	<u>NA</u>	TPHg TPHd 8260
Calc. purge	<u>1213</u>	<u>16.00</u>	<u>1</u>	<u>446</u>	<u>29.0</u>	<u>1</u>	<u>7.08</u>	<u>1</u>	<u>1</u>	BTEX MTBE Metals
volume	<u>1221</u>	<u>23.50</u>	<u>1</u>	<u>445</u>	<u>29.1</u>	<u>1</u>	<u>7.06</u>	<u>1</u>	<u>1</u>	Purging Method:
<u>23.08</u>										PVC Bailer/Pump/Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor

clear, low, good, no sheen, no odor

POST DEPTH TO WATER: 3.12

SAMPLE TIME: 1330

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
<u>10W-4</u>	<u>1226</u>	<u>2.00</u>	<u>NA</u>	<u>492</u>	<u>20.5</u>	<u>NA</u>	<u>6.94</u>	<u>NA</u>	<u>NA</u>	TPHg TPHd 8260
Calc. purge	<u>1232</u>	<u>4.00</u>	<u>1</u>	<u>491</u>	<u>20.4</u>	<u>1</u>	<u>6.95</u>	<u>1</u>	<u>1</u>	BTEX MTBE Metals
volume	<u>1235</u>	<u>5.50</u>	<u>1</u>	<u>492</u>	<u>20.4</u>	<u>1</u>	<u>6.94</u>	<u>1</u>	<u>1</u>	Purging Method:
<u>5.38</u>										PVC Bailer/Pump/Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor

clearish yellow, low, poor, no sheen, some odor, looks oily

POST DEPTH TO WATER: 3.68

SAMPLE TIME: 1345

Clearwater Group Inc. - 229 Tewksbury Avenue, Point Richmond, California 94801

Phone : (510) 307-9943 Fax : (510) 232-2823

updated 3/15/05





## ATTACHMENT C



Report Number : 44009

Date : 6/3/2005

Jessica Chiaro  
Clearwater Group, Inc  
229 Tewksbury Avenue  
Point Richmond, CA 94801

Subject : 8 Water Samples  
Project Name : Retech  
Project Number : AB024D

Dear Ms. Chiaro,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 44009

Date : 6/3/2005

Project Name : Retech

Project Number : AB024D

Sample : Upstream

Matrix : Water

Lab Number : 44009-01

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/28/2005
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	5/28/2005
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	5/28/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/1/2005
Octacosane (Diesel Surrogate)	96.0		% Recovery	M EPA 8015	6/1/2005

Sample : Downstream

Matrix : Water

Lab Number : 44009-02

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2005
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	6/1/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	6/1/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/1/2005
Octacosane (Diesel Surrogate)	100		% Recovery	M EPA 8015	6/1/2005

Approved By:

Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 44009

Date : 6/3/2005

Project Name : Retech

Project Number : AB024D

Sample : MW-7

Matrix : Water

Lab Number : 44009-03

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2005
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	6/1/2005
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	6/1/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/1/2005
Octacosane (Diesel Surrogate)	95.4		% Recovery	M EPA 8015	6/1/2005

Sample : MW-5

Matrix : Water

Lab Number : 44009-04

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2005
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	6/1/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	6/1/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/1/2005
Octacosane (Diesel Surrogate)	95.0		% Recovery	M EPA 8015	6/1/2005

Approved By:

Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 44009

Date : 6/3/2005

Project Name : Retech

Project Number : AB024D

Sample : MW-4

Matrix : Water

Lab Number : 44009-05

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/31/2005
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	5/31/2005
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	5/31/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/1/2005
Octacosane (Diesel Surrogate)	94.0		% Recovery	M EPA 8015	6/1/2005

Sample : MW-6

Matrix : Water

Lab Number : 44009-06

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2005
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	6/1/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	6/1/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/1/2005
Octacosane (Diesel Surrogate)	95.4		% Recovery	M EPA 8015	6/1/2005

Approved By:

Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 44009

Date : 6/3/2005

Project Name : Retech

Project Number : AB024D

Sample : MW-3

Matrix : Water

Lab Number : 44009-07

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2005
Toluene - d8 (Surr)	97.9		% Recovery	EPA 8260B	6/1/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	6/1/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/3/2005
Octacosane (Diesel Surrogate)	105		% Recovery	M EPA 8015	6/3/2005

Sample : MW-1

Matrix : Water

Lab Number : 44009-08

Sample Date :5/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2005
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	6/1/2005
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	6/1/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/3/2005
Octacosane (Diesel Surrogate)	105		% Recovery	M EPA 8015	6/3/2005

Approved By:

Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 44009


Date : 6/3/2005

QC Report : Method Blank Data

Project Name : Retech

Project Number : AB024D

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/1/2005	Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Octacosane (Diesel Surrogate)	73.8		%	M EPA 8015	6/1/2005	Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	6/2/2005	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Octacosane (Diesel Surrogate)	92.8		%	M EPA 8015	6/2/2005	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/31/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005	Toluene - d8 (Surr)	101		%	EPA 8260B	5/31/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005	4-Bromofluorobenzene (Surr)	105		%	EPA 8260B	5/31/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/31/2005						
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/31/2005						
Toluene - d8 (Surr)	101		%	EPA 8260B	5/31/2005						
4-Bromofluorobenzene (Surr)	103		%	EPA 8260B	5/31/2005						
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005						
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005						
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005						
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005						
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005						
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/28/2005						
Toluene - d8 (Surr)	102		%	EPA 8260B	5/28/2005						
4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	5/28/2005						

  
 Approved By: Joel Kiff

KIFF ANALYTICAL, LLC  
 2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



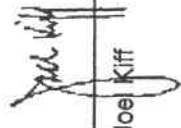
Report Number : 44009

Date : 6/3/2005

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **Retech**  
Project Number : **AB024D**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Relative Percent Diff. Limit
TPH as Diesel	Blank	<50	1000	1000	913	934	ug/L	M EPA 8015	6/1/05	91.3	93.4	2.35	70-130 25
TPH as Diesel	Blank	<50	1000	1000	856	830	ug/L	M EPA 8015	6/2/05	85.6	83.0	3.02	70-130 25
Benzene	44009-05	<0.50	40.0	40.0	39.9	39.7	ug/L	EPA 8260B	5/31/05	99.8	99.3	0.580	70-130 25
Toluene	44009-05	<0.50	40.0	40.0	39.4	38.3	ug/L	EPA 8260B	5/31/05	98.4	95.7	2.82	70-130 25
Tert-Butanol	44009-05	<5.0	200	200	215	206	ug/L	EPA 8260B	5/31/05	107	103	3.88	70-130 25
Methyl-t-Butyl Ether	44009-05	<0.50	40.0	40.0	35.0	34.8	ug/L	EPA 8260B	5/31/05	87.6	87.0	0.641	70-130 25
Benzene	44009-01	<0.50	40.0	40.0	40.2	38.6	ug/L	EPA 8260B	5/28/05	100	96.6	3.86	70-130 25
Toluene	44009-01	<0.50	40.0	40.0	39.8	38.3	ug/L	EPA 8260B	5/28/05	99.4	95.7	3.77	70-130 25
Tert-Butanol	44009-01	<5.0	200	200	194	191	ug/L	EPA 8260B	5/28/05	97.3	95.5	1.85	70-130 25
Methyl-t-Butyl Ether	44009-01	<0.50	40.0	40.0	35.2	34.8	ug/L	EPA 8260B	5/28/05	88.0	87.0	1.13	70-130 25
Benzene	44003-03	<0.50	40.0	40.0	40.3	39.8	ug/L	EPA 8260B	5/31/05	101	99.4	1.37	70-130 25
Toluene	44003-03	<0.50	40.0	40.0	40.4	39.4	ug/L	EPA 8260B	5/31/05	101	98.6	2.44	70-130 25
Tert-Butanol	44003-03	<5.0	200	200	196	196	ug/L	EPA 8260B	5/31/05	98.0	98.0	0.0935	70-130 25
Methyl-t-Butyl Ether	44003-03	<0.50	40.0	40.0	34.0	33.8	ug/L	EPA 8260B	5/31/05	85.0	84.6	0.472	70-130 25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number: 44009

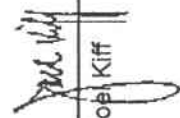
Date: 6/3/2005

QC Report : Laboratory Control Sample (LCS)

Project Name : Retech

Project Number : AB024D

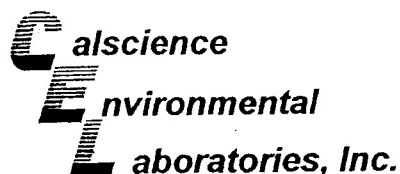
Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	5/31/05	91.9	70-130
Toluene	40.0	ug/L	EPA 8260B	5/31/05	90.7	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/31/05	95.7	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/31/05	86.4	70-130
Benzene	40.0	ug/L	EPA 8260B	5/28/05	97.2	70-130
Toluene	40.0	ug/L	EPA 8260B	5/28/05	96.5	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/28/05	91.7	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/28/05	82.9	70-130
Benzene	40.0	ug/L	EPA 8260B	5/31/05	97.8	70-130
Toluene	40.0	ug/L	EPA 8260B	5/31/05	97.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/31/05	96.2	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/31/05	90.4	70-130

  
Joe Kiff

Approved By:

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



June 06, 2005

Joel Kiff  
Kiff Analytical  
2795 2nd Street, Suite 300  
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 05-05-1809**  
Client Reference: **Retech**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/27/2005 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Nowak', is written over a horizontal line.

Calscience Environmental  
Laboratories, Inc.  
Stephen Nowak  
Project Manager

CA-ELAP ID: 1230

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501

## Analytical Report

Kiff Analytical  
 2795 2nd Street, Suite 300  
 Davis, CA 95616-6593

Date Received: 05/27/05  
 Work Order No: 05-05-1809  
 Preparation: EPA 3510B  
 Method: EPA 8270C  
 Units: ug/L

Page 1 of 2

Project: Retech

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
MW-1	05-05-1809-2	05/25/05	Aqueous	06/01/05	06/03/05	050601L10

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	ND	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benzidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						
Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual		
2-Fluorophenol	40	7-121		Phenol-d6	23	1-127			
Nitrobenzene-d5	61	50-146		2-Fluorobiphenyl	72	42-138			
2,4,6-Tribromophenol	76	41-137		p-Terphenyl-d14	73	47-173			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501

# Analytical Report

Kiff Analytical  
 2795 2nd Street, Suite 300  
 Davis, CA 95616-6593

Date Received: 05/27/05  
 Work Order No: 05-05-1809  
 Preparation: EPA 3510B  
 Method: EPA 8270C  
 Units: ug/L

Project: Retech

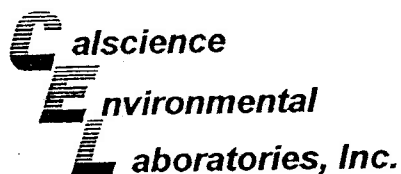
Page 2 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	095-01-003-1,691	N/A	Aqueous	06/01/05	06/02/05	050601L10

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	ND	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
2-Fluorophenol	45	7-121			Phenol-d6	27	1-127		
Nitrobenzene-d5	60	50-146			2-Fluorobiphenyl	67	42-138		
2,4,6-Tribromophenol	75	41-137			p-Terphenyl-d14	72	47-173		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

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## Quality Control - LCS/LCS Duplicate

Kiff Analytical  
2795 2nd Street, Suite 300  
Davis, CA 95616-6593

Date Received: N/A  
Work Order No: 05-05-1809  
Preparation: EPA 3510B  
Method: EPA 8270C

Project: Retech

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-1,691	Aqueous	GC/MS J	06/01/05	06/02/05	050601L10

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	37	37	4-142	0	0-24	
2-Chlorophenol	78	82	53-113	6	0-17	
1,4-Dichlorobenzene	80	83	50-122	3	0-19	
N-Nitroso-di-n-propylamine	71	76	56-146	6	0-22	
4-Chloro-3-Methylphenol	75	78	55-121	4	0-18	
Acenaphthene	80	83	55-139	4	0-17	
4-Nitrophenol	37	38	1-145	3	0-29	
2,4-Dinitrotoluene	55	59	41-161	6	0-22	
Pentachlorophenol	100	108	34-130	7	0-23	
Pyrene	86	90	38-170	5	0-27	
1,2,4-Trichlorobenzene	79	82	49-121	4	0-19	

RPD - Relative Percent Difference, CL - Control Limit

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**Glossary of Terms and Qualifiers**

Work Order Number: 05-05-1809

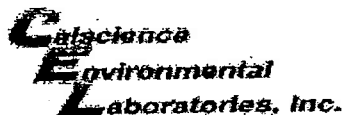
<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.











WORK ORDER #:

05 - 05 - 1809

Cooler 1 of 1

## SAMPLE RECEIPT FORM

CLIENT:

KIFF

DATE:

05/27/05

## TEMPERATURE - SAMPLES RECEIVED BY:

## CALSCIENCE COURIER:

- ☐ Chilled, cooler with temperature blank provided.  
☐ Chilled, cooler without temperature blank.  
☐ Chilled and placed in cooler with wet ice.  
☐ Ambient and placed in cooler with wet ice.  
☐ Ambient temperature.  
☐ °C Temperature blank.

## LABORATORY (Other than Calscience Courier):

- 3-4 °C Temperature blank.  
☐ °C IR thermometer.  
☐ Ambient temperature.

Initial:

TW

## CUSTODY SEAL INTACT:

Sample(s):

Cooler:

✓

No (Not Intact):

Not Applicable (N/A):

Initial:

TW

## SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples.....	✓		
Sample container label(s) consistent with custody papers.....	✓		
Sample container(s) intact and good condition.....	✓		
Correct containers for analyses requested.....	✓		
Proper preservation noted on sample label(s).....	✓		
VOA vial(s) free of headspace. ....			✓
Tedlar bag(s) free of condensation.....			✓

Initial:

TW

## COMMENTS: